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ABSTRACT

During the last decade there has been a heightened interest in teenage work experience as a partial solution to the problem of an increasingly visible delinquent youth culture. To examine the effect of teenage employment on drug use and other more serious delinquent behavior, students in grades 6-12, from a randomly selected national population, completed surveys in both 1981 and 1982 assessing their work experiences and the extent of their involvement during the last year in delinquent activities. An analysis of the results showed that of the students in the longitudinal sample, 34.3 percent reported regular employment in either 1981, 1982, or both years. The workers were distributed unevenly by race, gender, and grade level, with males, whites, and senior high school students being disproportionately represented in jobs. Female workers also came from more advantaged families than did female nonworkers. Workers and nonworkers differed on a number of dimensions before they commenced work, with female workers reporting more behavior involving interpersonal aggression and more than twice as much drug use as their nonworking female counterparts. Male workers reported lower levels of parental attachment than did male nonworkers, and workers of both genders reported significantly greater involvement in extracurricular activities than did nonworkers. In contrast to earlier reports, evidence from this study implies that teenage working does not increase delinquency and does not have a detrimental effect on commitment to education, involvement in extracurricular activities, time spent on homework, attachment to school, or attachment to parents. (Author/BL)

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Report No. 352
March 1984

YOUTH EMPLOYMENT, CRIME, AND SCHOOLING: A LONGITUDINAL STUDY OF A NATIONAL SAMPLE

Denise C. Gottfredson

The Johns Hopkins University

U.S. DEPARTMENT OF EDUCATION
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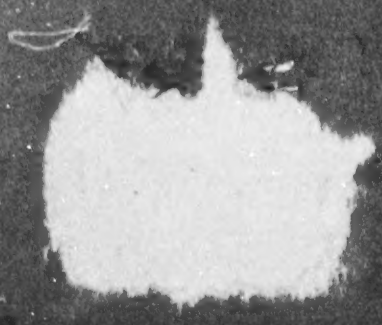

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A LONGITUDINAL STUDY OF A NATIONAL SAMPLE

Grant No. NIE-G-83-0002

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The Center

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three research programs to achieve its objectives:

The School Organization Porgram investigates how school and classroom organization affects student learning and other immediate outcomes of schooling. Current studies focus on parental involvement, microcomputers in schools, use of time in schools, cooperative learning, and other organizational strategies that alter the task, reward, authority and peer group structures in schools and classrooms.

The Education and Work Program examines the relationship between schooling and students' later-life occupational and educational success. Current projects include studies of the competencies required in the workplace, the sources of training and experience that lead to employment, college students' major field choices, and employment of urban minority youth.

The Delinquency and School Environments Program researches the problem of crime, violence, vandalism, and disorder in schools and the role that schools play in delinquency. Ongoing studies address the development of a theory of delinquent behavior, school effects on delinquency, and evaluation of delinquency prevention programs in and outside of schools.

The Center also supports a Fellowships in Education Research program that provides opportunities for talented researchers to conduct and publish significant research in conjunction with the three research programs.

This report, prepared by the Delinquency and School Environments Program, examines the effects of employment on the delinquency of junior and senior high school students.

Abstract

Data from a national study of delinquency prevention programs are used to examine the effect of working on delinquent behavior. Samples of students attending participating schools were asked in the Spring of 1981 and 1982 to report their work experiences and the extent of their involvement during the last year in delinquent activities. Regression analysis is used to examine the effect of working while attending secondary school on 1982 self-reported delinquency. In contrast to earlier reports, evidence from this study implies that teenage working does not increase delinquency and does not have a detrimental effect on commitment to education, involvement in extracurricular activities, time spent on homework, attachment to school, or attachment to parents. The models examined suggest that working decreases school attendance and dependance on parents for some subgroups, but these effects are not translated into increases in delinquency.

Acknowledgments

I am grateful to Michael S. Cook, Joyce L. Epstein, Gary D. Gottfredson and Lois Hybl for comments and editorial assistance on earlier drafts of this paper, to alternative education project personnel who assisted in the administration of the surveys on which this report is based, and to the students who completed the surveys.

Youth Employment, Crime, and Schooling:

A Longitudinal Study of a National Sample

During the last decade we have seen a heightened interest in teenage work experience as a partial solution to the problem of an increasingly visible delinquent youth culture. Several commentaries on the condition of American education (Illich, 1971; Goodman, 1971) and reports of three blue-ribbon commissions (National Commission on the Reform of Secondary Education, 1973; the President's Science Advisory Committee, 1974; the National Panel on High School and Adolescent Education, 1976) called attention to the failure of American education to prepare youths for roles as productive and contributing members of society. These commissions recommended the integration of school and work as a promising strategy for providing a more meaningful role for youths. More recent commission reports have continued to support this notion (Carnegie Council on Policy Studies in Higher Education, 1980; National Commission on Youth, 1980).

During the 1970's, the U.S. Department of Labor (DOL) launched a $3 billion youth employment and training initiative, and the National Institute of Education developed, evaluated and disseminated a model for career education that incorporated work experience as part of the regular school curriculum. Most of the available evidence about the effects of teenage working resulted from evaluations of these work-related programs and from basic research supported by the DOL initiative. These studies focused primarily on academic learning and attainment, the acquisition of job-skills, and economic outcomes. They tell us little about the effect of working on delinquent behavior, although evidence

from these studies suggests that some of the work programs were successful in increasing school attendance and retention (Barton & Frazer, 1980; Steinberg, 1982), grades in school (Barton & Frazer, 1980), and positive attitudes toward work and career knowledge (Bucknam, 1976). Few evaluations report long-term employment and earnings advantages for participants in work programs, but it is clear that the programs increased time spent employed, time spent enrolled in school, and perhaps most importantly, decreased time spent neither employed nor enrolled (Farkas, Smith, and Stromsdorfer, 1983). Research has also shown that working during the high school years increases future employment and earnings (Adams & Magnum, 1978; Herrnstadt, Horowitz & Sum, 1980; Meyer & Wise, 1979; Stephenson, 1979). Because academic failure and dropping out are known risk-factors for delinquent behavior, we might infer from these findings that some varieties of work show promise for reducing levels of delinquency.

The bulk of the evidence concerning work programs and work-schooling combinations support the basic premise behind the programs: Work experience can provide youths who do not fit into the mold of traditional schooling with an alternative route for success. But it is also true that work experiences would be more beneficial to youths if they were more carefully structured and more intense. Promising evidence links the success of work programs with the intensity of their education and training components (Ford Foundation, 1983).

Direct evidence about the effect of teenage working on delinquency is sparse. Evidence from a longitudinal study of birth cohorts born in

Racine, Wisconsin in 1942 and 1949 (Shannon, 1982) suggests that employment while in high school is weakly and inconsistently related to delinquency. When police records are used as the outcome measure, there is a tendency for work in high school to be negatively associated with delinquency, although for only two of the eight subgroup comparisons did the zero-order correlation reach statistical significance. For only one of the comparisons was there a significant direct effect after controlling for prior differences between workers and nonworkers, and this result is suspect because the standardized regression coefficient (-.182, $p<.05$) is larger than the zero-order correlation (-.12, NS), suggesting that multicollinearity characterizes the data. When self-reports of delinquent behavior are examined, about half of the cohort by sex comparisons show a negative and half a positive correlation with employment while in high school. Only one of these correlations (.18 for females in the 1942 cohort) reaches statistical significance, and it retains its significance when statistical controls are applied.

Shannon also reports that young men who commenced full-time work prior to the age of 18 had more arrests after they started working than did other young men who started working at a later age. However, when statistical controls for preexisting differences between early and late workers are applied in a multiple regression analysis, age at first job is not significantly related to adult delinquency.

Less direct evidence about the effect of work on delinquency comes from a study of the costs and benefits to adolescent development of early participation in the labor force (Steinberg, Greenberger, Gardu-

que, Ruggiero, and Vaux, 1982). The longitudinal portion of this study followed 176 Orange County, California, 11th and 12th graders who had never worked as of March, 1979. One year later 75 of the students reported that they had taken jobs. The authors challenged the long-held assumption that working during high school has a positive influence on the psychological well-being of the adolescent and helps to ease the transition into adulthood. Specifically, the authors reported that although working does have certain benefits for youth (such as increasing level of responsibility and autonomy), these benefits are accompanied by costs: The more time adolescents spent working, the less they appeared to enjoy school, the less time they spent on homework, and the lower were their emotional ties with their peers. The direction and magnitude of effects of working on cynicism towards work, materialism, acceptance of unethical practices, cigarette and marijuana use, and family closeness varied by social class, gender, or grade.

A reanalysis of the Youth in Transition data collected by Bachman (1975) suggests that employment during high school has no effect on young men's delinquency. D. Gottfredson (1982) found that although students' reports that they were working in eleventh grade were positively related to their reports of Delinquent Behavior in School and Interpersonal Aggression (but not Theft and Vandalism) in twelfth grade, these zero-order associations were reduced to nonsignificance when 10th grade delinquency and other predictors of delinquency were statistically controlled.

To summarize, little evidence implies that working leads to delinquency. The Orange County study is interesting because it suggests a negative effect of working on marijuana use--a type of illegal behavior that was not singled out in other studies. The Orange County study also connects working with a number of other outcomes that might be considered risk factors for delinquent behavior.

What Does Theory Tell Us?

Most delinquency theories seem to imply that working should reduce delinquency either by providing a legitimate means of production and hence making it unneccesary to turn to crime to meet survival or status needs (Becker, 1968; Cloward & Ohlin, 1960) or by strengthening the bond to the social order, thereby providing a restraining force against delinquency (Hirschi, 1969).

In contrast, Hirschi (1983) has recently provided an interesting explanation of why work might increase delinquent behavior: Parental control over a child's behavior depends in part on the resources available to the parents relative to the resources available to the child, and upon the child's aspirations. If working provides enough money to meet the child's needs, and if the child does not seek parental support for continuing education, dependence on the parent and the ability of the family to control behavior is diminished.

A human capital perspective may also be relevant. It suggests that working should increase the individual's "human capital" by providing work experience and longevity as a worker, characteristics that are

valued and rewarded in the market place. Accumulation of human capital leads to positive economic outcomes, including higher wages and more prestigious occupations; these positive economic conditions may in turn result in lower delinquency.

The present study examines the effect of teenage employment on drug use and more serious types of delinquency in a longitudinal sample that is more heterogeneous with respect to age and race than samples in previous studies of work and delinquency.

Methods

Data

Data used in this study were collected as part of the national evaluation of the Office for Juvenile Justice and Delinquency Prevention's Alternative Education Initiative (G. Gottfredson, 1982; Gottfredson, Gottfredson & Cook, 1983). Sixty-nine schools in seventeen cities were funded to operate alternative education projects and to demonstrate the utility of this approach to juvenile delinquency prevention. The schools were selected largely on the basis of apparent need (i.e., the client population had to exhibit the kinds of problems that OJJDP sought to reduce). The selected schools were located primarily in depressed, predominantly minority inner city areas: Chicago, South Bronx, Harlem, Compton, (CA), Charleston, (SC), Houston, Miami, St Paul and Minneapolis. Some small city schools in Kalamazoo and Plymouth, (MI), Pasadena, (CA), and southern New Jersey were selected, as well as some schools in Puerto Rico, the Virgin Islands and on a rural Indian reservation in Wisconsin.

Surveys of students in participating schools were conducted in the Spring of 1981 and a year later in the Spring of 1982. A random sample of approximately 200 students was selected each year from each school. Some of the participating schools provided services to target populations within the schools. In these cases, all students who received direct program services and all experimental control students were sampled with a probability of 1.0 each year, as were students who were part of a prior year's random sample. Students identified in advance as educable mentally retarded youths and all students below grade 6 were excluded from the sample. This large, diverse national sample is not representative of any well-defined population.

In all, 11,130 students in grades 6 through 12 completed a survey in 1981. Of these, 4311 (39%) completed a survey in 1982. Students who were no longer enrolled in one of the original 69 schools by Spring, 1982 were dropped from the school survey sample. About 44% of the original sample was excluded in this way. The analyses reported here are based on a random half of all students who completed a survey both years. Confirmatory analyses will be run on the remaining half sample at a later date when confirmatory analyses for several studies are run.

For all analyses involving measures of delinquency the sample is further restricted. Some of the alternative education projects censored the self-report delinquency items from the survey in 1981. This censoring affected 44% of the surveys completed the first year. The high stability of delinquency from year to year (Bachman, O'Malley and Johnston, 1978; Gottfredson, Gottfredson & Cook, 1983) makes it necessary to sta-

tistically control for 1981 delinquency levels in analyses which assess the effect of a correlate of delinquency on 1982 delinquency. Table 1 shows the characteristics of the full longitudinal sample as well as the restricted sample on which most analyses presented here are based. The restricted sample contains relatively more Spanish-speaking students from Puerto Rico and fewer junior high school Blacks from inner city areas (primarily Charleston, SC).

Table 1 also compares the characteristics of the sample used in the present study (SAES) and those used in other studies of work and delinquency. The table shows large differences among the samples. The Youth in Transition data are nationally representative of 10th grade males in 1969, and it is the only sample that is nationally representative. The Orange County study is based on a primarily white sample of suburban students in the tenth and eleventh grade in 1979. The Racine study represents a much older sample (the interviewees were 27 and 34 years old when they were interviewed in 1976) with a much longer follow-up period than do any of the other studies, but like the Orange County study its participants are mostly white. The SAES sample is predominantly minority, younger (modal grade level is seventh), and is located primarily in large cities.

Measures

The SAES surveys measured delinquent behavior and a number of variables theoretically related to delinquency as well as background characteristics. A detailed description of the item content of the scales and the reliabilities of the scales are provided elsewhere (Gottfredson,

Table 1

Ethnicity and Gender of Longitudinal Samples

Used in Studies of Work and Delinquency

	Number of cases	Ethnicity			Gender	
		Black	Spanish	White	Male	Female
SAES (full)	2172	.52	.26	.16	.47	.52
SAES (restricted)	1435	.42	.36	.16	.44	.56
Racine--1942	333	.06	.03	.91	.47	.53
Racine--1949	556	.11	.07	.82	.50	.50
Orange County	228	--[a]	.09	.81	.38	.62
Youth in Transition[b]	2213	.12	.01	.87	1.00	.00

[a]Not reported. 10% of the sample were reported as "other."
[b]Proportions reported are for baseline year. Longitudinal sample proportions were similar.

Gottfredson & Cook, 1983). The following describes the measures used in this study:

Age. This single-item measure is self-explanatory.

Attachment to parents. This is a six-item measure of "attachment," i.e. feeling close and wanting to be like parents. It is intended to measure an element of Hirschi's (1969) social bond. Its alpha reliability is .60.

Attachment to school. This ten-item scale is based on reports that the student likes school. It is intended to measure an element of Hirschi's (1969) social bond. Its alpha reliability is .76.

Belief in conventional rules. This six-item scale is based on student reports that taking advantage of others, breaking rules, etc., are OK. It is also intended to measure an element of the social bond according to Hirschi (1969). Its alpha reliability is .53.

Commitment. This composite was formed by averaging the standard scores for the following variables:

School attendance--A two-item index of class cutting and school cutting;

Educational expectation--A single item asking how far the student expects to go in school;

School grades--A self-report of school grades in the last term;

Prestige of occupational aspiration--A recode into Temme (1975) prestige scores of the occupation that the respondent wants to have when he or she reaches the age of thirty (intercoder reliability for the occupational coding is .91); and

School effort--A five-item scale based on students' reports that they try hard in school, turn their homework in on time, etc.

This composite measures Hirschi's (1969) notion of commitment of time and energy to conventional social goals. Its alpha reliability is .63.

Drug involvement.[1] This five-item scale asks respondents to report about their use of illegal substances during the past year. It includes questions about cigarette smoking, alcohol, marijuana, other drugs, and inhalants. Its alpha reliability is .75.

Employment status. This is a recode of the students' reports of employment status. A score of "0" is assigned if the student reported not having a regular job in 1981 and again in 1982. A score of "1" is assigned if the student reported having a regular job in either 1981, 1982, or both years.[2]

Gender. This single-item measure is coded "1" for males, and "0" for females.

Grade level. This single-item measure is recoded for most analyses into dummy variables for grades 6-8 and 9-12.

Interpersonal aggression. This six-item scale asks about involvement in crimes involving offenses against persons. Crimes range in seriousness from hitting or threatening to hit other students to carrying a concealed weapon. Its alpha reliability is .62. For many analyses a four-item subset of the items is used to minimize loss due to missing data. The alpha reliability of this subset is .51.

Involvement. This twelve-item checklist measures participation in ten different school and two community activities. Its alpha reliability is .62.

Location. This variable categorizes the school's location into inner city, small city, and non-continental U.S.A. locations.

Negative peer influence. This is a nine-item scale based on student reports that his or her friends get into trouble, do not like school, etc. Its alpha reliability is .65.

Parental dependance. This two-item scale is based on students' reports that they still have to depend on their parents' support for some time. Its alpha reliability is .36.

Parental education level. This is the average education level of the mother and father. Single-parent families are scored as the education level of the single parent. Its alpha reliability is .78.

Property destruction. This seven-item scale asks about involvement in crimes involving property offenses. Crimes range in seriousness from joyriding to breaking and entering. Its alpha reliability is .80. For many analyses a three-item subset of the items is used to minimize loss due to missing data. The alpha reliability of this subset is .65.

Race. This single-item measure is recoded for most analyses into dummy variables for Blacks, Spanish-speaking persons living in Puerto Rico, Spanish-speaking persons living on the mainland, and Whites.

Self-concept. This twelve-item scale measures students' self-esteem combined with their conception of themselves as prosocial, law-abiding citizens. Its alpha reliability is .61.

School non-attendance. This is a two-item index of class cutting and school cutting. Its alpha reliability is .61.

Time spent on homework. This is a single-item measure of the average amount of time the respondent spends on homework each day. Response categories range from "none or almost none" to "3 or more hours a day."

Analysis

Who Works?

Table 2 shows that workers are not evenly distributed across grade level, gender and race. Males work more than females and whites work more than minority students. Also, for all race subgroups except Puerto Ricans, high school students work more than junior high students. The minority underrepresentation in employment mirrors the pattern found in other studies (Feldstein & Ellwood, 1980). This table makes clear that workers differ from nonworkers on a number of characteristics before they enter the labor market. These preexisting differences must be taken into consideration in our examination of the effects of work.

Interactions

The first step in the analysis was a check for interactions between employment status, delinquency, and several potential moderator variables. Previous work (Shannon, 1983; Steinberg et al., 1982) reported interactions with age, gender, social class and geographic location. The restricted SAES sample was used to perform a series of analyses of variance to test for interactions. The first set indicated statistically significant interactions between gender, grade level and employment status on Interpersonal Aggression, between employment status and grade level on Property Damage, and between gender, race and employment status on Drug Use. Because the potential moderator variables are correlated, it is difficult to know which of the variables causes the interaction. In order to isolate the variables responsible for the

Table 2

Percentage of Respondents Reporting Having a Job, 1981-82

	No work		Work	
	N	%	N	%
Males (N=1027)	620	60.4	407	39.6
Grades 6-8 (N=697)	433	62.1	264	37.9
Black (N=337)	229	68.0	108	32.0
White (N=100)	42	42.0	58	58.0
Spanish, American (N=97)	66	68.0	31	32.0
Spanish, Puerto Rican (N=83)	44	53.0	39	47.0
Grades 9-12 (N=246)	135	54.9	111	45.1
Black (N=131)	75	57.3	56	42.7
White (N=28)	9	32.1	19	67.9
Spanish, American (N=23)	14	60.9	9	39.1
Spanish, Puerto Rican (N=40)	28	70.0	12	30.0
Females (N=1118)	789	70.6	329	29.4
Grades 6-8 (N=701)	513	73.2	188	26.8
Black (N=334)	260	77.8	74	22.2
White (N=95)	52	54.7	43	45.3
Spanish, American (N=89)	76	85.4	13	14.6
Spanish, Puerto Rican (N=104)	68	65.4	36	34.6
Grades 9-12 (N=327)	220	67.3	107	32.7
Black (N=185)	135	73.0	50	29.0
White (N=33)	13	39.4	20	60.6
Spanish, American (N=24)	15	62.5	9	37.5
Spanish, Puerto Rican (N=56)	37	66.1	19	33.9

Note. Table entries are row percentages within each category. Respondents who reported not having a job in 1981 and in 1982 are included in the "no work" category. Those who reported having a regular job in either 1981 or 1982 are included in the "work" category. Table entries are based on 1981 self-reports of gender, race and grade level for the entire SAES sample.

observed interactions, the data were partitioned by the variable with the largest interaction--gender in this case, and the analyses were repeated for males and females separately. No interactions remained for males, but large interactions between employment status and grade level persisted for females on all three delinquency outcomes, and a small but statistically significant interaction between race and employment status also persisted. Splitting the females into two groups on the basis of grade level eliminated all remaining interactions. The three groups identified by this analysis of interactions--males, females in grades 6-8, and females in grades 9-12--will be used in the remaining analyses involving the delinquency outcomes.

Working and Delinquency

Table 3 reports zero-order relations between work status and self-reports of delinquency in 1982. Males who reported having a job in 1981 or 1982 are significantly more likely to report crimes involving aggression against persons in 1982. These young men do not report significantly more drug use or property crimes. Females in high school who work are no more likely to report any kind of delinquency than such females who do not work, but younger females who work are much more likely to report all three types of delinquent behavior.

Does working cause these young men and junior high school females to become more delinquent? Table 4 shows that the young persons who worked during 1981 or 1982 (column 2) differ from those who did not work on many characteristics measured in 1981 (column 1). Female workers are more often white and less often Spanish American, are older, come from

Table 3

Means and Standard Deviations for 1982 Self-Reported Delinquency by Work Status in 1981 and 1982

Work status[a] and grade level	Interpersonal aggression			Property damage			Drug use		
	M	SD	N	M	SD	N	M	SD	N
Males									
No work	.19*	.24	360	.11	.21	347	.25	.30	347
Work	.23	.27	257	.14	.22	257	.29	.32	260
Females									
Grades 6-8									
No work	.12**	.18	289	.05**	.15	287	.17**	.27	288
Work	.18	.24	115	.09	.16	111	.32	.34	112
Grades 9-12									
No work	.07	.15	207	.03	.10	205	.20	.29	202
Work	.04	.11	90	.02	.05	90	.23	.30	89

[a]Respondents who reported not having a job in the Springs of 1981 and 1982 fall into the "No work" category. Those reporting regular employment in the Spring of either 1981 or 1982 fall into the "Work" category.

*$p<.05$.
**$p<.01$.

more advantaged families, are more interpersonally aggressive and report more than twice as much drug use as female nonworkers. They are also more active in extracurricular activities. Male workers are also more often white than male nonworkers, and they report more extracurricular activity and lower levels of parental attachment than do nonworkers.

One might argue that the differences in student behaviors and attitudes cited above are <u>effects</u> of working rather than preexisting differences between workers because the measure of work overlaps the measurement of the 1981 characteristic. The third column of Table 4 explores this possibility. It shows the 1981 characteristics of students who reported that they did not have a regular job in the Spring of 1981, but that they did have a job in the Spring of 1982. When these "new workers" are compared to students who never reported working, we find support for the notion that the differences between workers and nonworkers cited above predated the work experience. Even for female workers who reported not having a job in 1981, those who eventually worked reported significantly more crimes involving aggressive acts, used drugs more often and were more active in extracurricular activities than those who did not eventually report having a job. The male "new workers" were also more active in extracurricular activities in 1981 than were males who never worked, but the difference between new workers and nonworkers on parental attachment is not significant. Stronger evidence for both genders favoring a pre-work difference between workers and nonworkers is found in the differences in demographic characteristics summarized above.

Table 4

Means and Standard Deviations of 1981 Characteristics by Work Status in 1981 and 1982

1981 characteristic	No work M	No work SD	No work N	Worker, 1981-1982 M	Worker, 1981-1982 SD	Worker, 1981-1982 N	New worker in 1982 M	New worker in 1982 SD	New worker in 1982 N
		(N=404)		Males (N=282)				(N=101)	
% Black	.43	.50	404	.39	.49	282	.44	.50	101
% Spanish, American	.23	.42	404	.17	.38	282	.15*	.34	101
% Spanish, Puerto Rican	.18	.38	404	.17	.38	282	.17	.35	101
% White	.16	.37	404	.29**	.46	282	.30**	.46	101
Parental education	2.01	.83	209	2.16	.76	160	2.18	1.03	60
Age	13.73	1.97	402	13.84	1.86	280	13.88	1.99	100
Commitment to education	.09	.63	398	.06	.64	281	.08	.64	100
Parental attachment	.66	.26	348	.62*	.25	247	.64	.25	89
School attachment	.67	.27	363	.67	.24	260	.66	.24	96
Positive self-concept	.68	.18	310	.68	.18	214	.67	.14	76
Involvement	.19	.15	305	.25**	.19	225	.24*	.20	78
Belief in rules	.64	.24	319	.64	.24	234	.65	.24	83
Negative peer influence	.24	.21	386	.25	.21	265	.24	.21	95
Property destruction	.13	.26	398	.14	.25	280	.10	.20	101
Interpersonal aggression	.23	.26	385	.24	.27	255	.19	.23	91
Drug use	.2[illegible]	.27	304	.22	.26	219	.20	.24	86
		(N=314)		Females in Junior High School (N=123)				(N=45)	
% Black	.38	.49	314	.32	.47	123	.38	.49	45
% Spanish, American	.26	.44	314	.08**	.27	123	.04**	.21	45
% Spanish, Puerto Rican	.22	.41	314	.28	.45	123	.27	.45	45
% White	.18	.39	314	.36**	.48	123	.40**	.50	45
Parental education	1.92	1.29	173	2.35**	.29	94	2.22	1.28	32
Age	12.51	1.2[illegible]	311	12.79*	1.08	122	12.76	.93	45
Commitment to education	.30	.57	308	.40	.62	123	.40	.61	45
Parental attachment	.64	.26	307	.66	.28	123	.63	.25	45
School attachment	.73	.23	285	.71	.24	114	.73	.23	42
Positive self-concept	.72	.17	234	.71	.16	105	.67	.17	38
Involvement	.22	.18	269	.32**	.22	111	.32**	.21	40
Belief in rules	.70	.22	245	.69	.24	108	.66	.26	40
Negative peer influence	.18	.18	299	.17	.16	121	.14	.12	45
Property destruction	.04	.13	312	.06	.14	120	.07	.16	44
Interpersonal aggression	.14	.20	299	.19**	.23	112	.23**	.21	43
Drug use	.11	.20	245	.24**	.26	104	.24**	.26	34

Note. Table entries are based on the "restricted" SALT sample.

*=Mean for this group differs from mean for "no work" group at the $p<.05$ level.
**=Mean for this group differs from mean for "no work" group at the $p<.01$ level.

The preexisting differences between workers and nonworkers are important because students who are younger and more involved in extracurricular activities are somewhat less delinquent than other students, and because in the SAES data delinquency is moderately associated with race and socioeconomic status.[3]

Table 5 shows the results of a multiple regression of delinquency on work status and the 1981 characteristics on which workers and nonworkers differed. The table shows that level of delinquency in 1982 depends primarily on level of delinquency in 1981. No result implies that working increases or decreases delinquency.

Work and Other Outcomes

Recent reports of the costs of teenage working (Greenberger, 1983; Steinberg et al.,1982; Steinberger, 1982) and speculation about the effects of teenage working (Hirschi, 1983; Shannon, 1982) have suggested a number of possible detrimental effects of working. Steinberg et al. (1982) found that spending time in the workplace reduces school enjoyment, time spent on homework, and peer closeness and, for some subgroups, reduces family closeness and increases materialism, cynicism, acceptance of unethical practices, cigarette smoking and marijuana use. Other reports of results from the same study (Greenberger, 1983; Steinberg, 1982) interpret the evidence to imply that spending time in the workplace can decrease school achievement and attendance, and increase alcohol use. Shannon (1982) speculated that commitment to work during high school may lead to leaving school without a diploma, and Hirschi suggested that working may decrease dependance on parents, and hence parental control over teenagers' behavior.

Table 5

Correlations and Standardized Regression Coefficients for the Regression of 1982 Delinquency on Work Status and 1981 Characteristics Related to Work Status

1981 characteristic	Interpersonal aggression		Property damage		Drug use	
	r	Beta	r	Beta	r	Beta
Males (N=686)						
Parental attachment	-.08*	-.00	--a	--a	--a	--a
Involvement	.03	.00	--a	--a	--a	--a
Interpersonal aggression	.44**	.44**	--a	--a	--a	--a
White	.10**	.09*	--a	--a	--a	--a
Work status, 1981-82	.09**	.06	--a	--a	--a	--a
R^2	.21					
Females, Grades 6-8 (N=438)						
Spanish	-.34**	-.23**	-.18**	-.08	-.36**	-.18**
White	.11*	-.01	.20**	.13	.22**	.02
Parental education	.28**	.13	.20**	.11	.24**	.15*
Age	-.09	-.04	-.05	-.07	.09	.07
Involvement	.01	-.12	-.06	-.12	-.04	-.12*
Interpersonal aggression	.32**	.26**	--	--	--	--
Property destruction	--	--	.11*	.10	--	--
Drug use	--	--	--	--	.51**	.42**
Work status, 1981-82	.13**	.08	.13**	.11	.22**	.09
R^2	.21		.10		.35	

Note. Only 1981 characteristics that are related to work status are included in each equation as control variables. Table entries are based on the SAES "restricted" sample.

[a]Regressions not run because zero-order association between work and delinquency is nonsignificant.

*$p<.05$.

**$p<.01$.

Table 6 summarizes the evidence from the SAES on the effects of as many of these "cost" variables as we measured.[4] The analyses were performed on the unrestricted sample. The table shows that work status has small and often nonsignificant zero-order correlations with the 1982 "cost" measures. Working does not significantly reduce Commitment to Education for any group. We have not yet examined school dropout, but if Commitment is a precursor of dropout, we might take this as evidence that working probably does not cause students to leave school before obtaining a diploma.

Neither does working affect Attachment to School, or Attachment to Parents for any group. Student reports of school nonattendance are largely unaffected by working although, in results not shown, working Spanish American females report more nonattendance than do their nonworking counterparts, and this association holds up when statistical controls for age, 1981 reports of nonattendance, level of involvement in extracurricular activities, 1981 drug use and parental education level are applied.

These analyses provide limited support for Hirschi's hypothesis that working diminishes adolescents' dependance on parents. The effect is present only for senior high school aged boys. However, the reduced dependance on parents, even for this group, does not translate into increased delinquent behavior, as Hirschi suggested it would (see Table 5).

Finally, Table 6 implies that the relationship between work and extracurricular activities and between work and time spent on homework

Table 6

Correlations and Standardized Regression Coefficients Summarizing Relations between Work Status and Seven Outcomes Measured in 1982--by Gender

1982 Outcome	Males (N=1100)		Females (N=1184)	
	r	Beta	r	Beta
Commitment	-.06*	-.01a	-.04	--c
School nonattendance	.07*	.04	.13**	.04b
Time spent on homework	.05	--b	.00	--b
School attachment	-.01	--	-.04	--
Dependance on parents	-.10**	-.06a	-.12**	-.06
Attachment to parents	-.03	--	-.04	--
Involvement	.18**	.15**b	.12**	.08b

Note. Regression results are provided only when the zero-order association between work status and the outcome is significantly different from zero. Betas represent standardized regression weights in a regression of the 1982 outcome on Job Status (1981-82), controlling for the 1981 measure of the outcome and other 1981 correlates of Job Status. The control variables are as follows:

Females: Spanish American, White, Black, Parental Education. Age, Involvement. Drug Use.

Males: Involvement, White, Black, and Commitment.

N's are larger than those reported on Table 2 because cases are selected for inclusion in this analysis on the basis of student reports of gender in 1981. 1982, or 1983.

[a]Work Status X Grade level interaction is significant at $p<.05$ level.
[b]Work Status X Race interaction is significant at $p<.05$ level.
[c]Work Status X Parental Education interaction is significant at $p<.05$ level.

*$p<.05$.
**$p<.01$.

differs for persons of different races. Separate regressions by race and gender (not shown) show that for both variables, all significant correlations are in the opposite direction of that implied by the Greenberger & Steinberg work: Workers spend more time on homework and are more involved in extracurricular activities than are nonworkers. For females, these zero order correlations are reduced to nonsignificance when statistical controls are applied. For some male race subgroups, however, the work effect retains its significance even when controls are applied.

These results are counter-intuitive. It is difficult to imagine a mechanism through which working would increase involvement in extracurricular activities and time spent on homework. Recall from Table 4 that working students were more active to begin with than were nonworkers. The apparent effect in Table 6 might be a reflection of these same preexisting differences not adequately controlled by the imperfect measures used.

Summary and Discussion

The results of this examination of work and delinquency in a large, diverse sample of students in grades six through twelve may be interpreted as follows:

1. Of the students in the SAES longitudinal sample, 34.3% reported regular employment in either 1981, 1982 or both years. The workers are distributed unevenly by race, gender, and grade level, with males, whites and senior high school students being

disproportionately represented in jobs. Female workers also come from more advantaged families than do female nonworkers.

2. Workers and nonworkers differ on a number of dimensions before they commence work. Females report more behavior involving interpersonal aggression and more than twice as much drug use as their nonworking counterparts. Male workers report lower levels of parental attachment than do male nonworkers, and workers of both genders report significantly greater involvement in extracurricular activities than do nonworkers.
3. The preexisting differences between workers and nonworkers account for the observed differences in 1982 delinquency levels between the groups.
4. Working has no effect on Commitment to Education, Attachment to School or Attachment to Parents. Working leads to lower school attendance for Spanish American females, but this reduction in school attendance is not accompanied by an increase in delinquency. Working may cause senior high males to become less dependent on their parents, but this reduction is not associated with an increase in delinquency. Working may cause an increase in involvement in extracurricular activities and time spent on homework for males of certain race subgroups, although this result is probably artifactual.

The preponderance of evidence from the studies on work and delinquency suggest that work as teenagers experience it has little or no effect on delinquency. The Youth in Transition, School Action Effectiveness, and Racine studies provide no support for the notion that

working promotes or inhibits delinquency. Ambiguity surrounds much of the evidence for the "costs" of working found in the Orange County study: Some of the effects are positive for one group and negative for another, most hold up only when time spent in the workplace rather than work status is used as the independent variable, and, most importantly, some important preexisting differences between workers and nonworkers may not be adequately controlled. Nineteen percent of the Orange County students are non-white. Large race differences in work status and in a number of the outcomes are evident in the SAES and Racine samples. Uncontrolled race differences may permeate the Orange County results.

The work experiences typically available to students do not affect the academic learning or psychological well-being of the adolescent, according to the present results. Evidence cited earlier suggests that when work experience is carefully coordinated with the school curriculum, it can be expected to decrease school dropout and increase learning and school attendance. These special programs probably provide more appropriate and higher quality work experience than is typically available to adolescents. Furthermore, working during the high school years increases later employment and earnings. These outcomes stand on their own as benefits of early work experience, but they are also important when considered along with social control theory: These economic benefits of early work experience may provide a stake in conformity. Employment may strengthen adolescents' bonds to the social order by giving them more to lose by engaging in unlawful behavior. Hence, carefully implemented and theoretically based work experience and work-study combinations remain a plausible approach to reducing the risk of delinquent behavior.

Footnotes

[1]Analyses were carried out to determine the utility of examining different kinds of delinquent behavior rather than a global measure. The following statistic (from Glass & Stanley, 1970) was used to test the null hypothesis that the correlation between Property destruction and each predictor in the study was the same as the correlation between Interpersonal aggression and each predictor:

$$z = \frac{\sqrt{n}\,(r_{xy} - r_{xz})}{\sqrt{(1-r_{xy}^2)^2 + (1-r_{xz}^2)^2 - 2r_{yz}^3 - (2r_{yz} - r_{xy}r_{xz})(1-r_{xy}^2 - r_{xz}^2 - r_{yz}^2)}}$$

This test resulted in rejecting the null hypothesis for almost half of the correlation pairs for females, and one third of the pairs for males. The correlations of Drug use with the predictors were more dissimilar with either of the other types of delinquency than were the other two with each other, so I did not bother with the tedious calculation of the statistical test.

[2]A more detailed report of the students' work experiences would have provided a more sensitive measure of work history. The teenage labor market is much more dynamic than the adult labor market, with young adults moving in and out of briefly-held jobs at a high rate (Clark & Summers, 1980; Hall, 1980). Whether or not an individual holds a job at any particular time is probably not a sensitive measure of total work experience. Only about half of the students who reported having a job in 1981 also reported having a job in 1982. On the other hand, 82% of those reporting that they were unemployed in 1981 also reported not having a job in 1982. Whether or not a student has entered the labor market is probably a better indicator of work experience than is whether or not a student currently holds a job.

[3]In the SAES data, whites and people from families with higher parental education levels are more likely to engage in all types of delinquent behaviors. We suspect this is because of the large proportion of students living in Puerto Rico in the sample. These Spanish students have particularly low levels of delinquent behavior, and come from families with low levels of parental education compared to students on the mainland.

[4]Significant interactions were found between work status and grade level, race and parental education level on several of the outcomes examined. Whenever a race, grade level, or parental education interaction was indicated, the regression was run separately for the different races, for three groups of low, medium, and high parental education levels, or for junior and senior high grade levels. All results for those subset regressions that resulted in a significant effect of working on an outcome are described in the text.

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